



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: AS907-3-1E-A1 (HTF7500E) BYPASS RATIO: 4.2  
 UNIQUE ID NUMBER: 01P14HN014 PRESSURE RATIO ( $\pi_{co}$ ): 21.1  
 COMBUSTOR: SABER-1  
 ENGINE TYPE: MTF RATED THRUST ( $F_{oo}$ ) (kN): 29.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	4.1	101.8	45.4	15.0
AS % OF ORIGINAL LIMIT	21.0	86.3	55.3	45.2
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			69.2	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			69.8	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			70.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			74.1	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 - OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.320	0.06	0.56	17.11	13.6
CLIMB OUT	85	2.2	0.267	0.07	0.73	15.59	8.8
APPROACH	30	4.0	0.097	0.12	6.83	8.45	0.7
IDLE	7	26.0	0.048	1.31	34.64	3.83	1.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			147	104	2786	1263	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				10	10	10	10
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				3.5	94.1	42.9	13.6
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				0.7	4.0	2.1	1.6
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				2.55-4.63	88-99.4	37.49-44.6	9-13.6

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	96.4-97.6
TEMPERATURE (K)	296-313
ABS HUMIDITY (kg/kg)	0.0013-0.0125

### FUEL

SPEC	Jet A
H/C	1.87-1.89
AROM (%)	16.9-20.5

MANUFACTURER: Honeywell  
 TEST ORGANIZATION: Honeywell  
 TEST LOCATION: Phoenix, AZ  
 TEST DATES: 07/04/2010-29/07/2010

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

- Reference: Honeywell Report 21-14050(29)-1
- Exhaust Smoke and Gaseous Emissions Similarity Analysis for the AS-907-3-1E Turbofan Engine
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)